(19) World Intellectual Property Organization International Bureau

emational Bureau





(43) International Publication Date 10 February 2005 (10.02.2005)

PCT

(10) International Publication Number WO 2005/013473 A1

(51) International Patent Classification⁷: H02P 7/00, B60L 9/18, H02P 7/63

H02M 7/48,

(21) International Application Number:

PCT/JP2004/010249

(22) International Filing Date:

12 July 2004 (12.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003-204762

31 July 2003 (31.07.2003) JJ

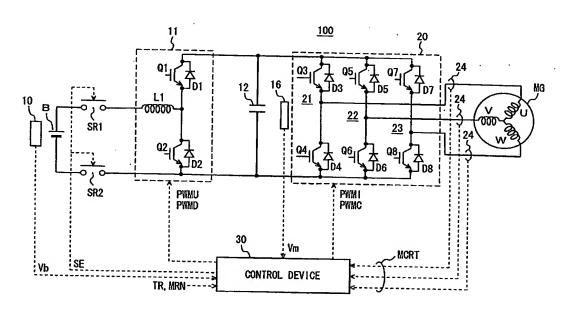
- (71) Applicants (for all designated States except US): TOY-OTA JIDOSHA KABUSHIKI KAISHA [JP/JP]; 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP). DENSO COR-PORATION [JP/JP]; 1-1, Showa-cho, Kariya-shi, Aichi 4488661 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): OKAMURA.

Masaki [JP/JP]; c/o Toyota Jidosha Kabushiki Kaisha 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP). YA-MASHITA, Takashi [JP/JP]; c/o Denso Corporation 1-1, Showa-cho, Kariya-shi, Aichi 4488661 (JP).

- (74) Agents: FUKAMI, Hisao et al.; Fukami Patent Office, Mitsui Sumitomo Bank Minamimorimachi Bldg., 1-29 Minamimorimachi 2-chome, Kita-ku, Osaka-shi, Osaka 5300054 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: LOAD DRIVER CAPABLE OF SUPPRESSING OVERCURRENT



(57) Abstract: A control device (30) determines whether a motor generator (MG) is controlled in a PWM control mode, an over-modulation control mode or a rectangular-wave control mode. If a command to perform a boosting operation by a voltage step-up controls an inverter (20) to drive the motor generator (MG) is controlled in the rectangular-wave control mode, the control device (30) controls an inverter (20) to drive the motor generator (MG) by switching the control mode to the overmodulation or PWM control mode. Further, the control device (30) controls the inverter (20) to drive the motor generator (MG) by suppressing increase of a torque command value (TR).

WO 2005/013473 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

with international search report